

Having thus described the invention, it is now claimed:

1. A method for transmitting data communications comprising:
receiving an input signal;
5 converting the input signal to a radio frequency data signal;
amplifying the radio frequency data signal with an amplifier having an adjustable bias
control;
detecting a power signal from the radio frequency data signal;
converting the power signal to an error signal;
10 amplifying the radio frequency data signal proportionately with the error signal; and
transmitting the radio frequency data signal.
2. The method set forth in claim 1 further comprising the step of modulating the input
signal.
- 15 3. The method set forth in claim 1 wherein the step of proportionally amplifying the radio
frequency data signal further comprises the step of adjusting a gain control of the amplifier.
4. The method of claim 1 wherein the step of amplifying the radio frequency data signal
20 further comprises the step of adjusting the bias of the amplifier.
5. The method of claim 1 wherein the step of converting the input signal comprises the steps
of:
performing a sequence spread spectrum operation on the input signal resulting in a spread
25 data input signal; and
converting the spread data input signal to a radio frequency data signal.

6. The method set forth in claim 1 wherein the amplifier is an amplifier having an adjustable gain control.
- 5 7. The method set forth in claim 4 wherein the step of amplifying the radio frequency data signal includes amplifying the radio frequency data signal in accordance with a desired output power.
8. The method set forth in claim 7 further comprising the step of inputting the desired output
10 power level into a digital to analog converter connected to an adjustable gain control of the amplifier to achieve the selection of the desired output power.
9. The method set forth in claim 5, wherein the sequence spread spectrum operation includes one of a binary phase shift key operation, a complimentary code key operation or a
15 quadrature phase shift key operation.
10. The method set forth in claim 1, wherein the step of detecting the power signal includes the step of detecting the power signal with a diode element.
- 20 11. The method set forth in claim 1, wherein the step of converting the power signal to the error signal includes the step of generating at least a portion of the power signal from a printed circuit board coupler.
12. The method set forth in claim 11 wherein the printed circuit board coupler is a printed
25 circuit board microstrip coupler.

13. The method set forth in claim 1, wherein the step of proportionately amplifying the radio frequency data signal includes the step of controlling a gain of the amplifier to achieve a substantially constant output transmission power over a temperature range.

14. The method set forth in claim 1, wherein the step of proportionately amplifying the radio frequency data signal includes the step of generating a desired output transmission power.

15. An apparatus for transmitting data communications comprising:

a receive means adapted for receiving an input signal;

a first converting means adapted for converting the input signal to a radio frequency data signal;

an first amplifying means adapted for amplifying the radio frequency data signal;

a detecting means adapted for detecting a power signal from the radio frequency data signal;

a second converting means adapted for converting the power signal to an error signal;

a second amplifying means adapted for amplifying the radio frequency data signal proportionately with the error signal; and

a transmission means adapted for transmitting the radio frequency data signal.

16. The apparatus set forth in claim 15 wherein the first converting means includes:

spreading means adapted for performing a direct sequence spread spectrum operation on the input signal resulting in a spread data input signal; and

a third converting means adapted for converting the spread data input signal to a spread radio frequency data signal.

17. The apparatus set forth in claim 15 wherein the amplifying means includes an amplifier having an adjustable gain control.

18. The apparatus set forth in claim 15 wherein the second amplifying means includes an amplifier having an adjustable bias current control for selecting a bias current for a desired transmission output power.

19. The apparatus set forth in claim 15 further comprising a coupler means adapted for coupling transmission power to a radio frequency detector diode element.

20. The apparatus set forth in claim 15 wherein the second amplifying means includes an adjusting means adapted to adjust a gain control of an amplifier to achieve a substantially constant output transmission power over a selected temperature range.

21. An apparatus according to claim 20, wherein the adjustable gain control is selected by a digital to analog converter connected to the adjustable gain control of the amplifier which corresponds to the desired transmission output power.

22. An apparatus according to claim 16, wherein the spreading means consists of either a binary phase shift key operation, complimentary code keyed operation, or a quadrature phase shift key operation.

23. An apparatus according to claim 15, wherein the detecting means for detecting a power signal is a diode element.

24. An apparatus according to claim 19, wherein the coupler means is a printed circuit board microstrip coupler.

25. An apparatus according to claim 18, wherein the output transmission power is substantially constant over a temperature range.